

COBO40S

Single, 240V Motor Drive Controller with Travel Timer

Features

- Small Size (145mm x 130mm)
- Slows down motor speed
- Variable slow speed control
- Variable Torque control
- Variable Travel Time control for each motor
- Built-in Transformer
- Optional Limit Switches Inputs



| | |
|---------|--------------|
| COBO40S | Single Motor |
| COBO40D | Dual Motors |

Applications

- Single 240VAC motor control for domestic and industrial gates and doors.

Description

The COBO40S is a 240 Volt control card with slow speed and Torque control.

The speed of the slow speed is adjustable with the trimpot marked slow speed. The travel time in slow speed is fixed at 10 seconds. If the gate/door is not fully opened or closed in 10 seconds the user should increase the full speed travel timer trimpot (Marked as TRAVEL TIME). Slow speed is indicated on the card with the motor open or close LED flashing next to the trimpot.

The torque control is a safety feature which adjusts the amount of pressure applied when the gate/door hits an object. This is adjustable from 160VAC to 230VAC.

Auto Close

Adjustable from 3 to 50 seconds.

Code Switch Setting *(Gray indicates switch position)*

| | |
|--|---|
| <p>Auto Close</p> <p>1 2 3 4 5 6</p> | <p>PB / RC up Only</p> <p>1 2 3 4 5 6</p> |
| <p>Security Close</p> <p>1 2 3 4 5 6</p> | <p>Extended Lock Pulse</p> <p>1 2 3 4 5 6</p> |
| <p>Extended Travel Time</p> <p>1 2 3 4 5 6</p> | <p>Lock Release</p> <p>1 2 3 4 5 6</p> |

PB / RC up Only

An input on the PB or a wireless remote will open door/gate only. You can not close door/gate with PB or RC input. Door/gate must be closed with Auto Close.

Security Close

The door/gate immediately closes after the photo beam is broken and the vehicle moves away from the photo beam, even if the door/gate is not fully open.

Extended Lock Pulse

Enabled when switch 4 is on. When extended lock pulse is enabled an additional 2 seconds is provided, bringing the total lock pulse to 4 seconds.

Extended Travel Time

Normal travel is 5 – 58 seconds. Extended is 10-116 seconds.

Lock Release

Pressing the push button or remote control will close the gate for 0.5s and give a lock pulse

Other Features

| | |
|------------------------|--|
| Auto Close Trimpot | Sets the auto close time from 3 to 50 seconds. |
| Red M1 Open LED | Indicates the direction of door/gate travel. The LED flashes when the motor is in slow speed. |
| Red M1 Close LED | Indicates the direction of door/gate travel. The LED flashes when the motor is in slow speed. |
| TRV Trimpot | TRV trimpot sets the travel time. It can be adjusted from 5 – 58 seconds. It should be set so that the motor goes into slow speed 300mm before fully open or closed position. Extended travel time is 10-116 seconds |
| Fuse | Replaceable 240VAC 5 Amp fuse. |
| Maximum run timer | The motor will switch-off after 10 seconds of going into slow speed. |
| Slow Speed Trimpot | Controls the slow speed. Turn clockwise to increase speed, anti-clockwise to reduce speed |
| Torque Control Trimpot | Controls the amount of torque applied in full speed. Turn clockwise to increase torque, anti-clockwise to reduce torque |

Installation Instruction**Auto Closing**

Enabled when switch 1 is on. The AC timer can be adjusted from 3 to 50 seconds by the on board trimpot. Auto Close timer starts when the door is opened and stopped. Input from the Photo Cell terminal will hold-off the closing cycle.

Open Only

Enabled when switch 2 is on. This feature enables the user to open the door/gate but when the door/gate is opening the remote control and push button is disabled and the door will fully open. Auto close will have to be enabled to close the door, Switch 1 on.

Security Closing

Enabled when switch 3 is on. The door/gate immediately closes after the photo beam is broken and the vehicle moves away from the photo beam, even if the door/gate is not fully open. If the door/gate is opening and no vehicle passes through the door/gate then Auto Close will close the door/gate. Auto close will have to be enabled to close the door, Switch 1 on.

Lock Output

This terminal block outputs a short pulse of 2 seconds on opening cycle.

Extended Travel Time

Enabled when switch 5 is on. The normal travel time is 5 to 58 seconds. The extended travel time is 10 to 116 seconds.

Lock Release

Enabled when switch 6 is on. When the gate is closed, pressing the PB or remote control will close the gate for 0.5 seconds and give a lock pulse. The gate will then start to open. This function will assist in releasing the lock for swing gates.

Limit Switch

The limit switches are normally closed. To use limit switches remove links from the terminal blocks and wire to relevant limit switches.

Push Button Input

Push button is a normally open contact. When pressed it will start the opening or closing cycle. This push button should be waterproof for internal and external use. Waterproofing will prevent false activations, which normally occurs due to moisture inside the button.

Photo Cell Input

Photo Cell input is normally closed contact. The photocell is used as a safety feature. If the motor is closing and the photo beam is broken, motor will stop instantly and then open fully again. Should an object be blocking the motor (i.e. photo cell is broken), closing cycle or auto closing is disabled.

X Output

This terminal block outputs 24VDC while the door is moving. This allows the user to connect a 24 Volt DC relay on the terminal marked "X ". The relay can be used to switch a warning light or horn to indicate the door is moving. X output can source 30mA.

Slow Speed

The travel time in slow speed is fixed at 10 seconds. Slow speed is indicated by the motor open or close LED flashing.

If the slow speed trimpot is turned fully clockwise (set to max. slow speed) then the slow speed is disabled. This means that the motor will travel in normal speed even in the final 10 sec of the travel. (*Updated April 2007*).

Torque

The motor starts up with full torque for 3 seconds. This allows the motor to have maximum torque on start up. After 3 seconds the motor torque is set by the torque trimpot.

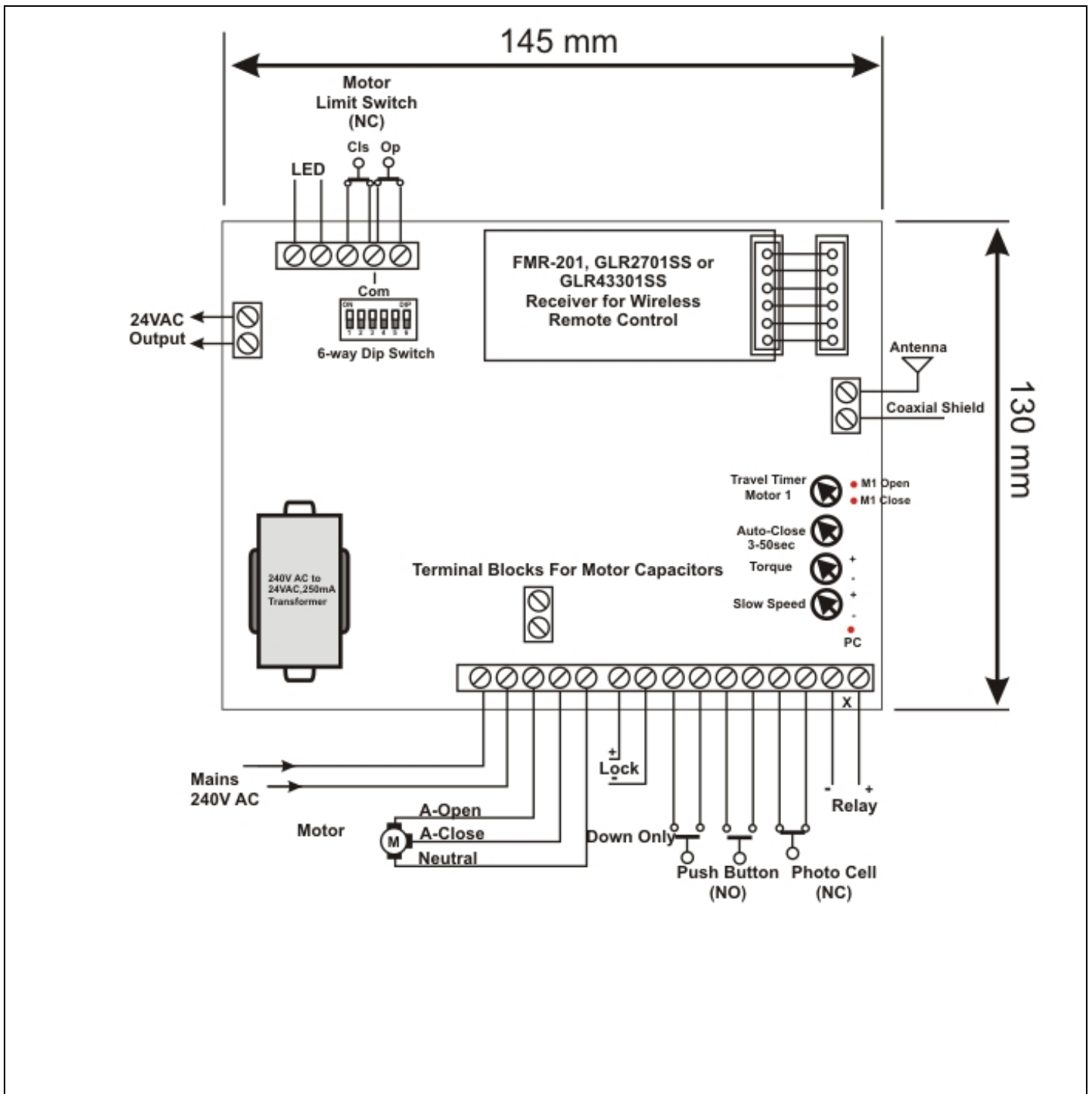
Antenna

The antenna connection is used to connect an antenna for the plug-in FMR-201, GLR2701SS or GLR43301SS receivers. The antenna can be a 50 ohms antenna or a piece of approximately 1metre long wire.

Startup Instructions

1. Make sure wiring of control board is complete.
2. Move the gates to fully closed position.
3. Switch on power.
4. Set the TRV trimpot to minimum (fully-anticlockwise)
5. First pulse of the push button or radio transmitter should always open the gate/door if lock release is not selected. [If Lock Release is selected gates will close for 0.5s and then open.]
6. If motors run in the opposite direction, switch off power and swap the motor wires in the terminals A1 and A2.
7. Adjust the Torque trimpot to get the desired torque.
8. Adjust the Slow Speed trimpot to get the desired slow speed.
9. Set the TRV trimpot so that motor goes into slow speed about 300mm before it hits the end stop. The slow speed region can be seen by the Open or Close LED's flashing.
10. Run the gate/door a number of times so that a symmetrical operation is achieved.

Wiring Diagram



COBO40SE

The COBO40 is also available in a weatherproof plastic case. Its small size makes it possible to fit into the small C200 case and is called COBO40SE. Motor capacitors which are normally rated at 10uF 250VAC is also included. Larger capacitors are available upon request.

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